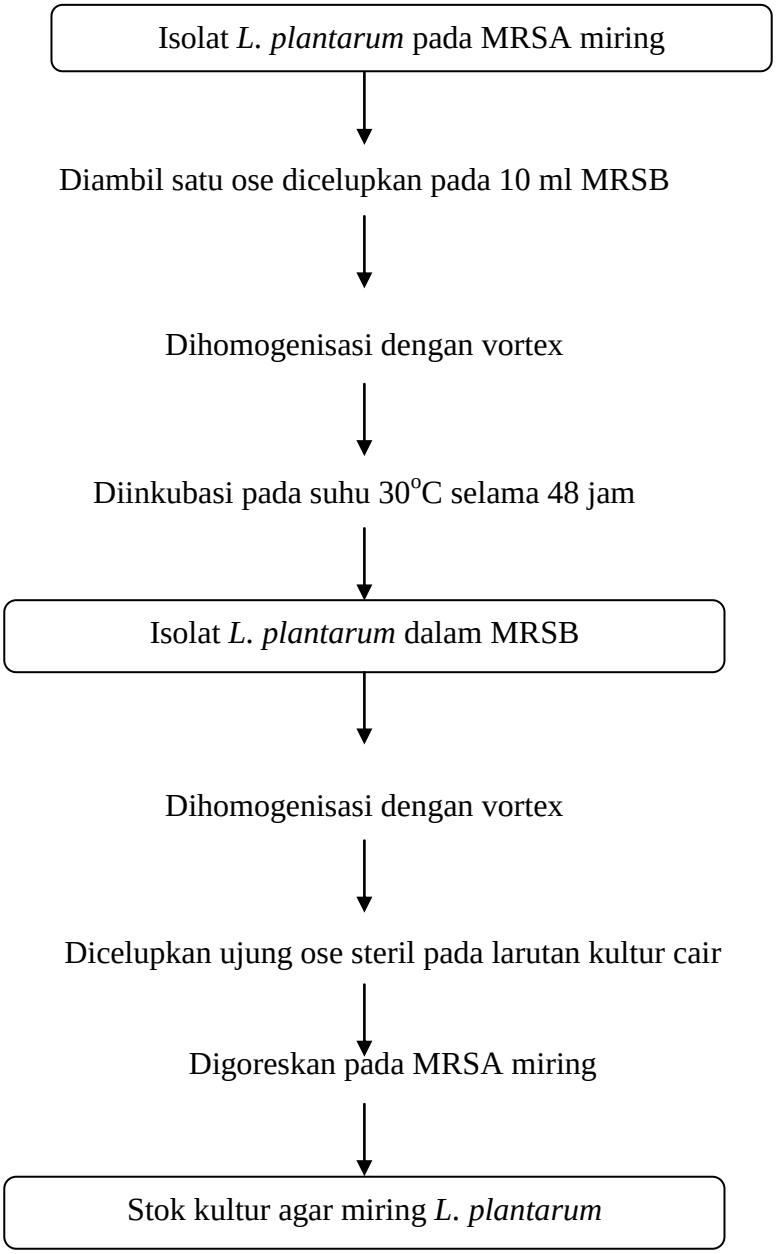
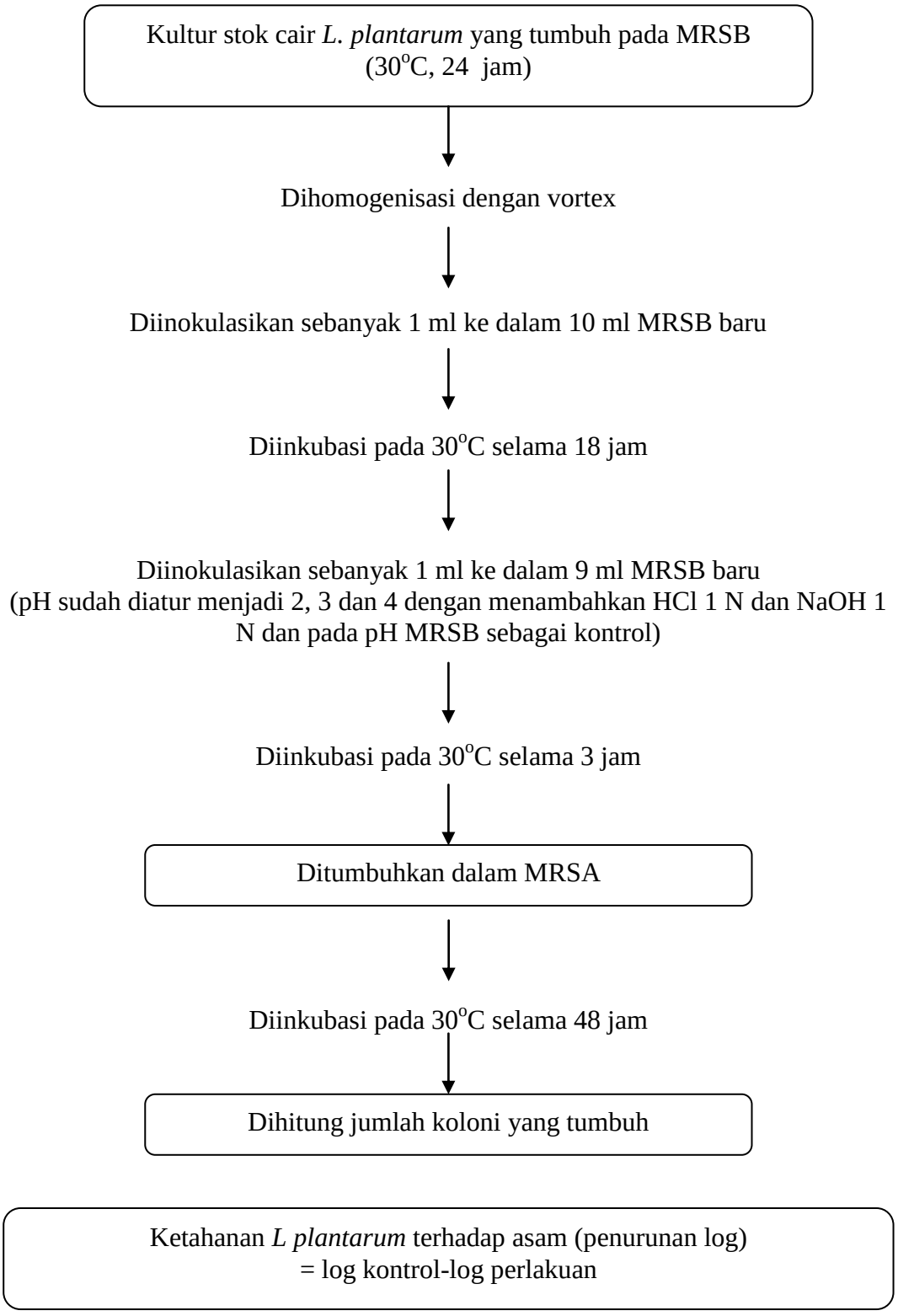
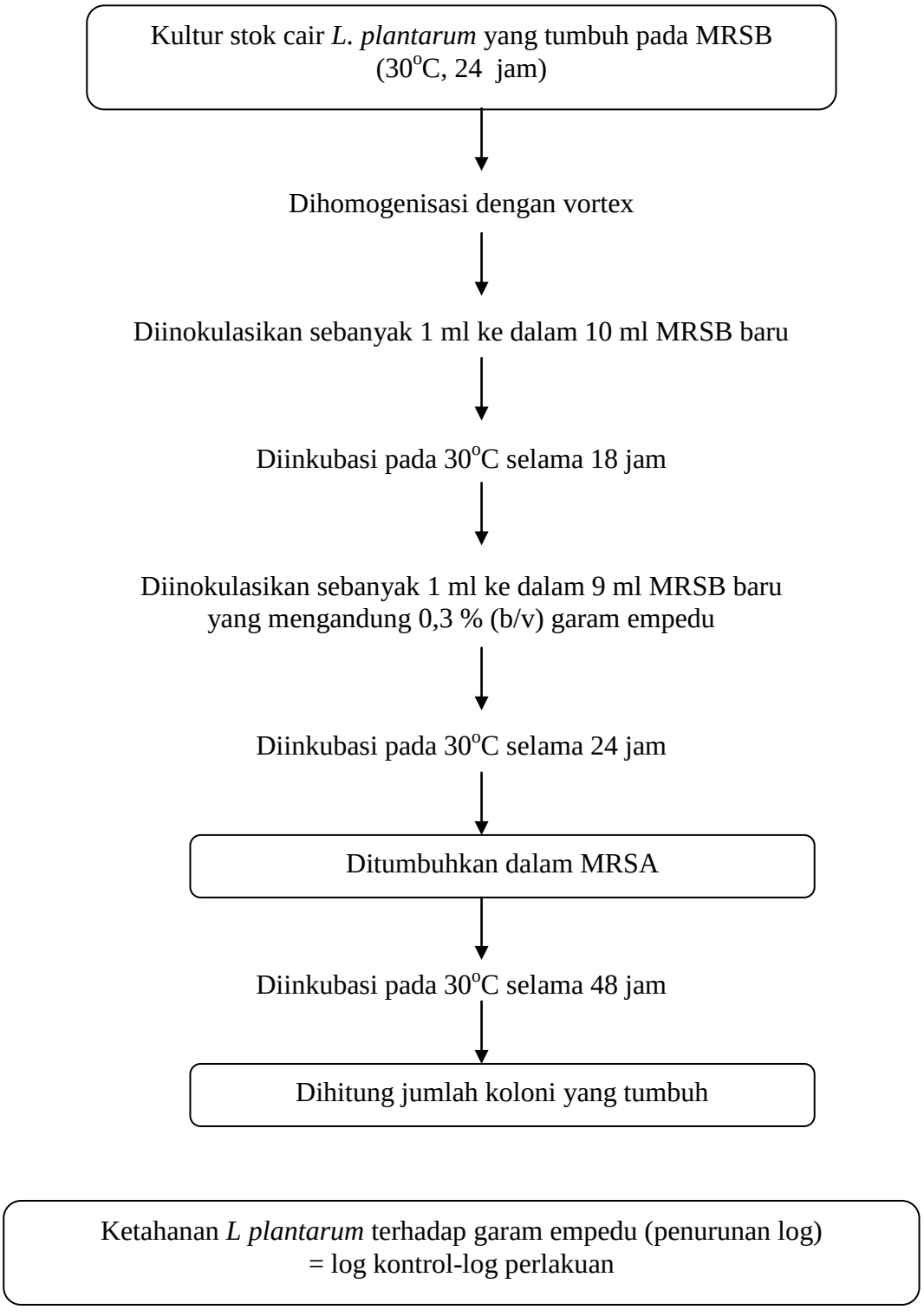
Lampiran 1. Skema Pembuatan Stok Kultur Agar Miring (Ngatirah *et al*., 2000)



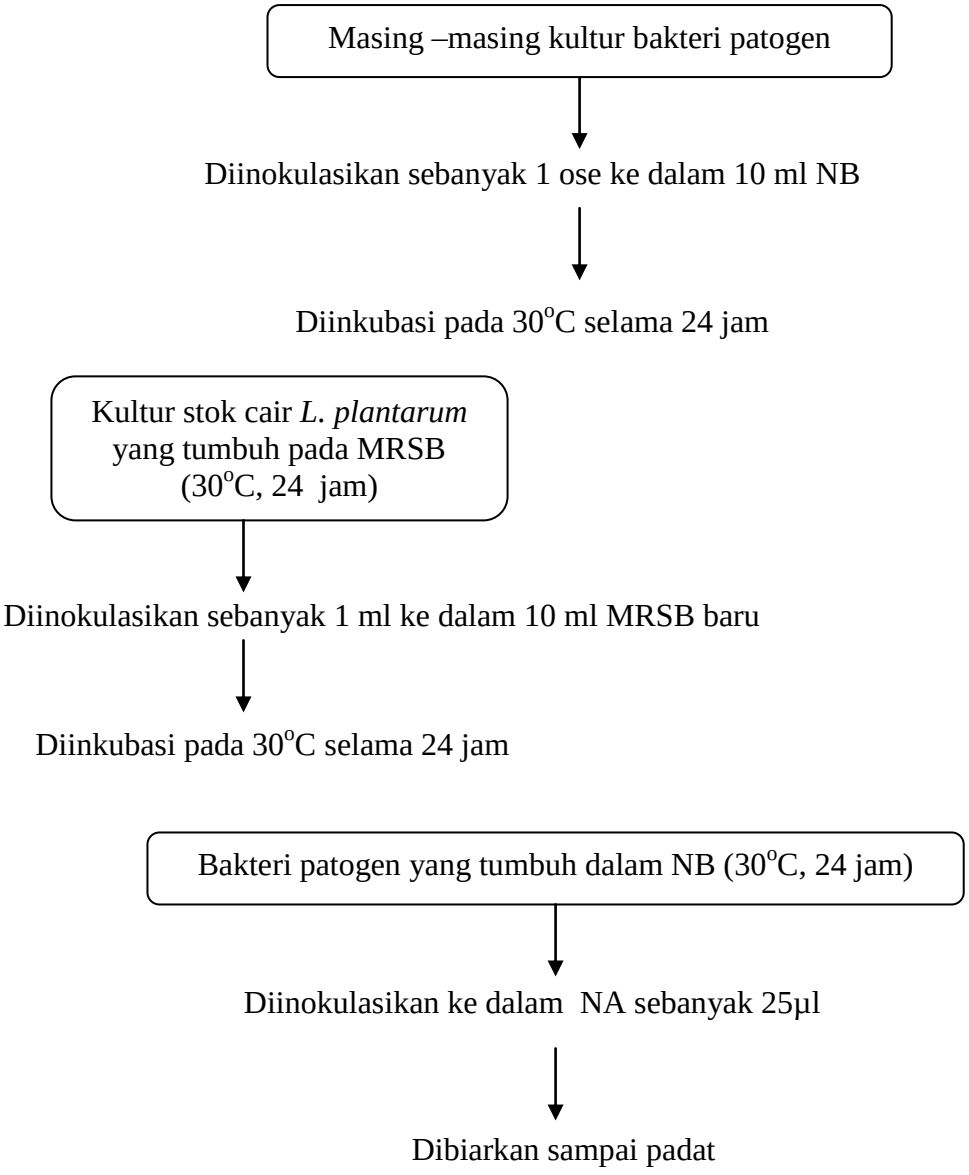
Lampiran 2. Skema Uji Ketahanan *L. plantarum* Terhadap Asam (modifikasi Zavaglia, *et al*., 1998 dalam Evanikastri, 2003)

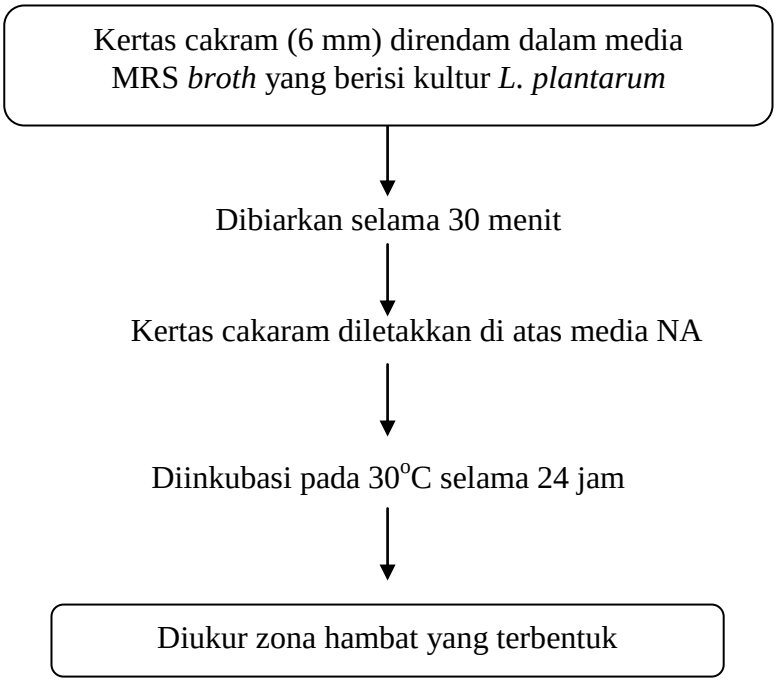


Lampiran 3. Skema Uji Ketahanan *L. plantarum* Terhadap Garam Empedu 0,3% (b/v) (modifikasi Ngatirah *et al*., 2000 dalam Kusumawati, 2002)



Lampiran 4. Skema Uji Penghambatan *L. plantarum* Terhadap Bakteri Patogen (modifikasi Ngatirah *et al*., 2000 dalam Kusumawati, 2002)




Kertas cakram (6 mm) direndam dalam media MRS *broth* yang berisi kultur *L. plantarum*
Dibiarkan selama 30 menit
Kertas cakaram diletakkan di atas media NA
Diinkubasi pada 30°C selama 24 jam
Diukur zona hambat yang terbentuk

Lampiran 5. Data Hasil Uji Ketahanan *L. plantarum* Terhadap Asam, Garam Empedu 0,3% (b/v) dan Penghambatan Terhadap Bakteri Patogen

Data Hasil Uji Ketahanan *L. plantarum* Terhadap Asam

pH	Jumlah BAL (cfu/ml)			Rata-rata
	Ulangan I	Ulangan II	Ulangan III	
2	$4{,}5 \cdot 10^{6}$	$7{,}1 \cdot 10^{7}$	$4{,}2 \cdot 10^{6}$	$2{,}7 \cdot 10^{7}$
3	$4{,}8 \cdot 10^{7}$	$6{,}2 \cdot 10^{5}$	$4{,}4 \cdot 10^{7}$	$3 \cdot 10^{7}$
4	$1{,}3 \cdot 10^{8}$	$7 \cdot 10^{7}$	$6{,}3 \cdot 10^{7}$	$4{,}9 \cdot 10^{7}$
Kontrol (MRSB)	$9. 10^{8}$	$2{,}9 \cdot 10^{8}$	$4{,}1 \cdot 10^{8}$	$5{,}3 \cdot 10^{8}$

Rata-rata inokulum: $8{,}8 \cdot 10^{8}$

Data Hasil Uji Ketahanan *L. plantarum* Terhadap garam empedu 0,3% (b/v)

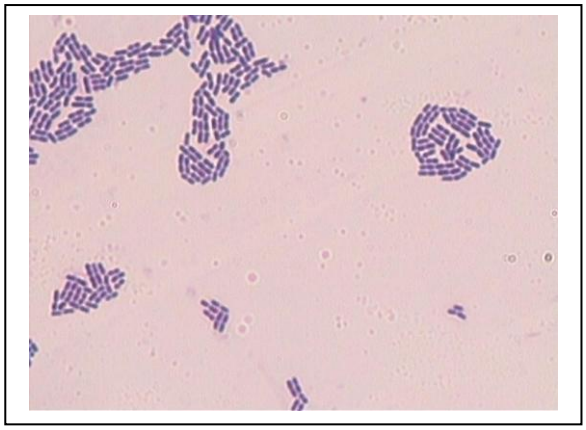
Perlakuan	Jumlah BAL (cfu/ml)			Rata-rata
	Ulangan I	Ulangan II	Ulangan III	
Kontrol (MRSB)	$2{,}9 \cdot 10^{10}$	$5 \cdot 10^{10}$	$9{,}2 \cdot 10^{9}$	$2{,}9 \cdot 10^{10}$
Garam *bile*	$9{,}1 \cdot 10^{9}$	$5{,}3 \cdot 10^{8}$	$7 \cdot 10^{9}$	$5{,}5 \cdot 10^{9}$

Rata-rata inokulum: $6{,}7 \cdot 10^{8}$

Uji Penghambatan *L. plantarum* Terhadap Bakteri Patogen

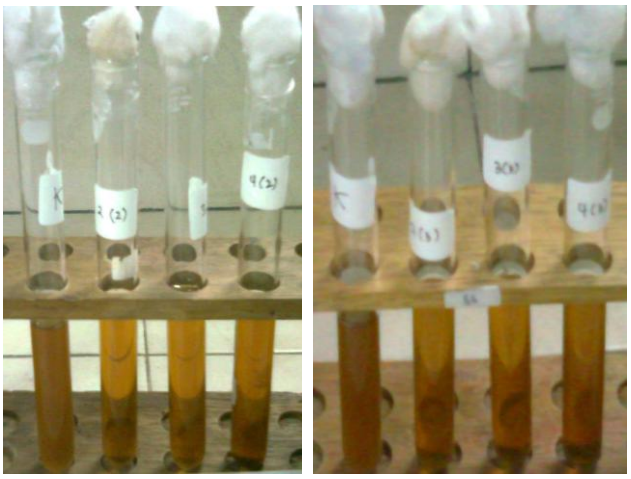
Bakteri patogen	Diameter zona hambat (mm)			Rerata (mm)
	Ulangan I	Ulangan II	Ulangan III	
Staphylococcus aureus	5	8	6	6,3
Salmonella thypi	3	4	5	4
Eschericia coli	3	3	4	3,3

Lampiran 6. Gambar *L. plantarum* Hasil Isolasi dari Sayuran dan Rumput Gajah, Pengamatan Uji Ketahanan *L. plantarum* Terhadap Asam



Gambar 1. *L. plantarum* Hasil Isolasi dari Sayuran dan Rumput Gajah

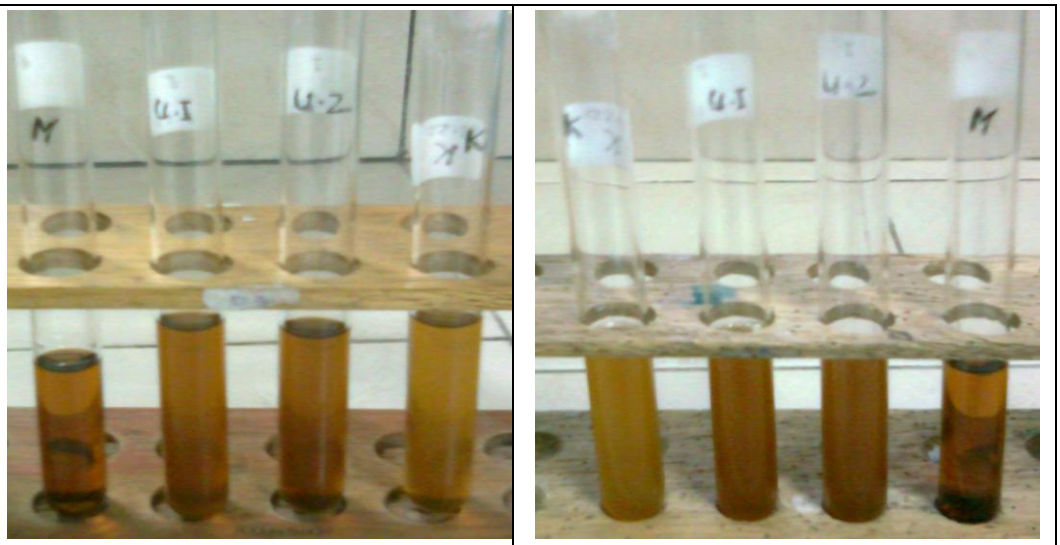
(a)



(b)

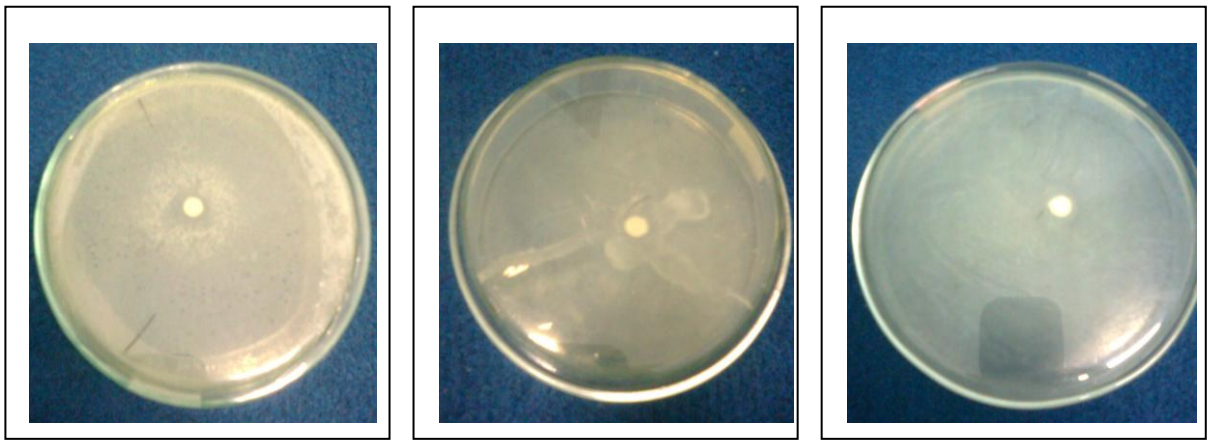
Gambar 2. (a) Pengamatan uji ketahanan *L. plantarum* terhadap asam sebelum inkubasi. (b) Uji ketahanan *L. plantarum* terhadap asam setelah inkubasi.

Lampiran 7. Gambar Pengamatan Uji Ketahanan *L. plantarum* Terhadap Garam Empedu 0,3% (b/v) dan Penghambatan Terhadap Bakteri Patogen



(a) (b)

Gambar 3. Pengamatan Uji Ketahanan *L. plantarum* Terhadap garam empedu 0,3% (b/v). (a) *L.plantarum* sebelum inkubasi. (b) *L.plantarum* setelah inkubasi.



(a) (b) (c)

Gambar 4. Pengamatan Uji Penghambatan *L. plantarum* Terhadap Bakteri patogen (a) *Staphylococcus aureus*, (b) *Salmonella typhi*, (c) *Escherecia coli*

Lampiran 8. Komposisi Media

No	Media	Komposisi (g/L)
1	deMan Rogosa Sharpe (MRS) Broth MERCK GaA, Germany	52,2 g/L Peptone from casein 10,0 Meat extract 8,0 Yeast extract 4,0 D(+) Glucose 20,0 Di-potassium hydrogen phospate 2,0 Tween 80 1,0 Di-ammonium hydrogen citrate 2,0 Sodium Acetate 5,0 Magnesium sulphate 0,2 Manganese sulphate 0,04 pH 5,7±0,2 25 ^{o}C Sterilisasi 121^{o}C 15 menit
2	deMan Rogosa Sharpe (MRS) Agar MERCK GaA, Germany	66,2 g/L Peptone from casein 10,0 Meat extract 8,0 Yeast extract 4,0 D(+) Glucose 20,0 Di-potassium hydrogen phospate 2,0 Tween 80 1,0 Di-ammonium hydrogen citrate 2,0 Sodium Acetate 5,0 Magnesium sulphate 0,2 Manganese sulphate 0,04 Agar 14,0 pH 5,7±0,2 25 ^{o}C Sterilisasi 121^{o}C 15 menit
3	Nutrien Broth (NB) MERCK GaA, Germany	13 g/L ‘Lab lemco powder 10,0 Yeast extract 2,0 Peptone 5,0 Sodium chloride 5,0 pH 7,4±0,2
4	Nutrien Broth (NA) Oxoid LTD Basingstoke Hampshire, England	28 g/L ‘Lab lemco powder 10,0 Yeast extract 2,0 Peptone 5,0 Sodium chloride 5,0 Agar 15,0 pH 7,4±0,2

Lampiran 9. Gambar Alat Penelitian

 Oven	 Timbangan digital
 Hot plate	 Autoclave
 Laminar Air Flow	 pH Indikator

	
Colony counter	Shaker water bath
	
Vortex	Mikropipet